

**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, 33 U.S.C. §§1251 et seq., and the Massachusetts Clean Waters Act, as amended, Massachusetts General Laws Chapter 21, §§26-53, the

**City of Cambridge  
Department of Public Works  
147 Hampshire Street  
Cambridge, MA 02139**

is authorized to discharge from:

**11 Combined Sewer Overflows (CSOs) listed in Attachment A**

to receiving waters named: **Alewife Brook, Charles River**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective **sixty (60) days after the date of signature.**

This permit and the authorization to discharge expire at midnight, five years from the effective date.

This permit supercedes the permit issued on March 26, 1993.

This permit consists of **8** pages and **Attachments A through G** in Part I and 35 pages in Part II including General Conditions and Definitions.

Signed this 23<sup>rd</sup> day of September, 2005

/s/ SIGNATURE ON FILE

Linda M. Murphy, Director  
Office of Ecosystem Protection  
Environmental Protection Agency  
Region I  
Boston, MA

Director  
Division of Watershed Management  
Department of Environmental Protection  
Commonwealth of Massachusetts  
Boston, MA

**Part I.****COMBINED SEWER OVERFLOWS****A. Effluent Limitations**

1. During wet weather, the permittee is authorized to discharge combined storm water and wastewater from combined sewer outfalls listed in **Attachment A**, subject to the following effluent limitations.
  - a. The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants. The EPA has made a Best Professional Judgement (BPJ) determination that BPT, BCT, and BAT for combined sewer overflow (CSO) control include the implementation of Nine Minimum Controls (NMC) specified below and detailed further in Part I.B. NMCs and Part I.C. Minimum Implementation Levels, of this permit. Implementation of these controls is required by the effective date of the permit.
    - i. Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows.
    - ii. Maximum use of the collection system for storage.
    - iii. Review and modification of the pretreatment program to assure CSO impacts are minimized.
    - iv. Maximization of flow to the POTW for treatment.
    - v. Prohibition of dry weather overflows from CSOs.
    - vi. Control of solid and floatable materials in CSO.
    - vii. Pollution prevention programs that focus on contaminant reduction activities.
    - viii. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
    - ix. Monitoring to effectively characterize CSO and the efficacy of CSO controls.
  - b. The discharges shall not cause violations of Federal or State Water Quality Standards.

- c. Discharge frequencies and volumes for the Charles River CSO discharges are limited in accordance with the Revised Recommended Plan for the Charles River in MWRA's "Final Environmental Impact Report"(FEIR) and CSO Facilities Plan", July 1997, MA DEP's Administrative Determination and Use Attainability Analysis, December 31, 1997 and Federal court order (U.S. v. M.D.C., et al., No. 85-0489 (D. Mass)) as may be amended. These frequencies and volumes are shown in **Attachment B**.
- d. Discharge frequencies and volumes for Alewife Brook CSO discharges are limited in accordance with the Revised Recommended Plan for the Alewife Brook/Upper Mystic River watershed in MWRA's "Final Environmental Impact Report" (FEIR) and CSO Facilities Plan", July 1997, MA DEP's Administrative Determination and Use Attainability Analysis, December 31, 1997 and Federal court order (US v. MDC., et al., No. 85-0489 (D. Mass)) as may be amended. The "Notice of Project Change" document that was submitted by the City of Cambridge and the MWRA on April 30, 2001 and the document "Final Variance Report for Alewife Brook and the Upper Mystic River", July, 2003 revised these frequencies and volumes, which are shown in **Attachment C**.

#### **B. Nine Minimum Controls, Minimum Implementation Levels**

The permittee must implement the nine minimum controls in accordance with the documentation submitted December 31, 1996 with a response to EPA comments dated May 1, 1997. The permittee must evaluate, in its annual report (see Part I.D. below) any modifications to the approved program which enhance its effectiveness and can be reasonably implemented during the upcoming year. The proposed level of control must always meet or exceed the Minimum Implementation Levels described in Part I.C.

#### **C. Minimum Implementation Levels**

1. Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to insure that it is in good working condition and adjusted to minimize combined sewer discharges and tidal surcharging. (NMC # 1, 2 and 4). The following inspection results shall be recorded: the date and time of the inspection, the general condition of the facility, and whether the facility is operating satisfactorily. If maintenance is necessary, the permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The permittee shall maintain all records of inspections for at least three years.

**Annually, no later than February 1<sup>st</sup>,** the permittee shall submit a certification to the State and EPA which states that the previous calendar year's monthly inspections were conducted, results recorded, and records maintained.

2. Discharges to the combined system of septage, holding tank wastes or other material which may cause a visible oil sheen or containing floatable materials are prohibited during wet weather when CSO discharges may be active. (NMC# 3,6, and 7).

3. Dry weather overflows (DWOs) are prohibited (NMC# 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and the State within 24 hours in accordance with the reporting requirements for plant bypass (See Part 1.F. Unauthorized Discharges and Part II.D.1.e. of this permit).
4. The permittee shall quantify and record all discharges from combined sewer outfalls (NMC# 9). Quantification may be through direct measurement or estimation. When estimating, the permittee shall make reasonable efforts, i.e. gaging, measurements, to verify the validity of the estimation technique. The following information must be recorded for each combined sewer outfall for each discharge event:
  - Estimated duration (hours) of discharge;
  - Estimated volume (gallons) of discharge; and
  - National Weather Service precipitation data from the nearest gage where precipitation is available at daily (24-hour) intervals and the nearest gage where precipitation data at minimum of one-hour intervals is available to the permittee. Cumulative precipitation per discharge event shall be provided;
  - A description of whether the discharge activation and volume are in accordance with the MWRA Final CSO Facilities Plan or the “Notice of Project Change” document, or updates to these documents.

The permittee shall maintain all records of discharges for at least eight (8) years after the expiration date of this permit.

**Within 3 months of the effective date of this permit**, the permittee will submit a CSO monitoring plan to EPA and MADEP for approval, which describes the methods it will use to quantify CSO activations and volumes. The CSO monitoring plan will be implemented upon EPA and MADEP approval. Activation frequencies and discharge volumes required to be submitted in the annual report (see Section I.D.1) shall thereafter be reported in accordance with methods identified in the monitoring plan.

5. The permittee shall maintain identification signs for all combined sewer outfall structures (NMC# 8). The signs must be located at or near the combined sewer outfall structures and easily readable by the public from the land and water. These signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following information:

**WARNING:\***  
**CITY OF CAMBRIDGE**  
**DEPARTMENT OF PUBLIC WORKS**  
**WET WEATHER**  
**SEWAGE DISCHARGE**  
**OUTFALL (discharge serial number)**

\* For existing signs which otherwise meet the requirements of this section, the word

“Warning” need not be added.

Where easements over property not owned by the permittee must be obtained to meet this requirement, the permittee will use its best efforts to identify the appropriate landowners and to obtain the necessary easements.

The permittee, to the extent feasible, will add a universal symbol to their warning signs reflecting a CSO discharge, or will place additional signs in languages other than English based on notification from the EPA and the State or on the permittee’s own good faith determinations that the primary language of a substantial percentage of the residents in the vicinity of a given outfall structure is not English.

#### **D. Annual Report**

**By April 30th of each year** the permittee shall submit a report which includes the following information;

1. Activation frequency and discharge volume for each CSO during the previous calendar year. The report shall include this information for each of the authorized CSO discharges listed on **Attachment A**.
2. Precipitation during the previous year for each day, including total rainfall, peak intensity, and average intensity.
3. Status of the implementation of CSO abatement work for which the permittee is directly responsible in accordance with the MWRA Final CSO Facilities Plan and the Federal court order (as may be amended).
4. For outfalls listed in Attachment A provide the following information in the Annual Report for years 3 and 5 using the updated MWRA model (or equivalent) for comparison:
  - a. A comparison between the precipitation for the previous year and the precipitation in the typical year under future planned conditions used in the MWRA Final CSO Facilities Plan or “Notice of Project Change” document, whichever is appropriate. The comparison shall include the number of events and size of events (including recurrence interval).
  - b. A comparison, for each CSO, between the activation volume and frequency for the previous year and the volume and frequency expected during a typical year under future planned conditions.
  - c. An evaluation of whether the CSO activation volume and frequency for the previous year is in accordance with the estimates in the MWRA Final CSO Facilities Plan or the “Notice of Project Change” document, given the precipitation which occurred during the year, and the CSO abatement activities which have been implemented. Where CSO discharges are determined to be greater than the activation frequency or volume

in either document above, the permittee shall include a discussion of remaining CSO abatement activities and an assessment of the impact of those projects on attaining the level of CSO control identified in the relevant document, or any amendments thereto.

5. A summary of modifications to the approved NMC program which have been evaluated and a description of those which will be implemented during the upcoming year. In the first annual report submitted in accordance with this permit, the permittee shall submit a public notification plan to describe the measures actively being taken to meet NMC #9, and an evaluation of further measures to enhance the public notification program, including use of web postings with CSO information. (see NMC #9 in Part I A.1.a.viii)

#### **E. CSOs Subject To Water Quality Variances/Reopener**

1. CSOs discharging to the Lower Charles River were previously granted a 24 month variance under the Massachusetts Water Quality Standards. The variance conditions for the Charles River were issued on September 2, 1998 and became effective October 1, 1998. This variance has been extended on three different occasions, most recently through October 1, 2007, by MADEP's letter of October 1, 2004. A copy of this determination letter for the variance extension is included as **Attachment D** and the fact sheet accompanying this variance extension is included as **Attachment E**.
2. CSOs discharging to the Upper Mystic River/Alewife Brook were originally granted a 36 month variance under the Massachusetts Water Quality Standards. The Variance became effective on March 5, 1999. This variance has been extended on three different occasions, most recently through September 1, 2007, by MADEP's letter of September 1, 2004. A copy of this determination letter for this variance extension is included as **Attachment F** and the fact sheet accompanying this variance extension is included as **Attachment G**.
3. The permit's discharges must meet Federal and State water quality standards and be consistent with any water quality standards variances or variance extensions approved by the EPA. The variances for the Charles River and for the Upper Mystic River/Alewife Brook noted above were approved by EPA on September 15, 2005. Following the expiration of these EPA-approved variances, EPA may re-open the permit and establish, through a permit modification, limitations and conditions consistent with the water quality standards established by MADEP and approved by EPA.

**F. Unauthorized Discharges**

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit from those outfalls listed in **Attachment A** of this permit. Discharges of wastewater from any other point sources are not authorized under this permit. The permittee must provide twenty four hour reporting of unauthorized discharges (see section D.1.e. of Part II of the permit) for all dry weather overflows from the combined system.

**G. Notice of Elimination**

The permittee shall give notice of elimination or change in status of any outfall listed in **Attachment A** as soon as possible in writing to the Director of the Office of Ecosystem Protection at EPA and to the Director of the Division of Watershed Management at the MA DEP.

**H. Reporting Requirements**

All of the required reports and notifications outlined in this part should be submitted to the addresses in Part J (below) of this permit.

**I. Certification and Signature of Reports**

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with section D.2. of Part II of this permit.

**J. Report Submission**

1. Signed and dated originals of all notifications and reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, MA 02114

2. Signed copies of all notifications and reports shall be submitted to the State at:

Massachusetts Department of Environmental Protection  
1 Winter Street  
Boston, MA 02108  
Attn: Mr. Kevin Brander

and

Massachusetts Department of Environmental Protection  
Division of Watershed Management  
Surface Water Discharge Permit Program  
627 Main Street, 2nd Floor  
Worcester, Massachusetts 01608

**K. Retention of Records**

The permittee shall retain all records of all monitoring information, copies of all reports required by this permit and records of all other data required by or used to demonstrate compliance with this permit, for at least eight years. This period may be modified by alternative provisions of this permit or extended by request of the Director at any time.

**L. State Permit Conditions**

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection under Federal and State law, respectively. As such, all the terms and conditions of this Permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts DEP pursuant to M.G.L. Chap. 21, §43.
2. Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such Permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.